Notice of Findings of No Significant Impact

TO ALL INTERESTED GOVERNMENTAL AGENCIES AND PUBLIC GROUPS

As required by state and federal rules for determining whether an Environmental Impact Statement (EIS) is necessary, an environmental review has been performed on the proposed action below:

PROJECT:	City of Red Lodge Water System Improvement Project
PROJECT NUMBER:	XP – 98884101-0 (EPA Grant No.)
EPA GRANT:	$ 337,500
USDA RD LOAN:	$ 4,304,715
TSEP GRANT:	$ 750,000
DNRC RRGL GRANT:	$ 100,000
LOCAL FUNDS:	$ 92,000
TOTAL COST:	$ 5,584,215

The City of Red Lodge, through a 2006 Preliminary Engineering Report (PER) prepared by HKM Engineering Inc., has investigated the needs of their public water system. The PER examined all components of the system including supply, storage, transmission and distribution. The PER identified deficiencies within the City's storage, transmission and distribution systems. The storage capacity does not meet current state standards, and much of the distribution system is comprised of old, undersized lines that cannot pass recommended fire flows. Water losses in the system are excessive and repair of leaks is an on-going need. The deficiencies within the City's water system create a risk to the public health and safety for the residents and visitors to the City of Red Lodge.

The proposed Phase I water system improvements include the replacement of approximately 9,700 feet water transmission main between the treatment plant and the City, replacement of approximately 7,500 feet of water main, and the installation of approximately 1,600 feet of 12-inch water distribution main, installation of fire hydrants, service connections, construction of a new 500,000-gallon buried concrete water storage reservoir and meter building at the existing water treatment plant, and all associated appurtenances. The purpose of the project is to make improvements to the water system that is needed to reduce leakage from old mains and improve fire protection to the City.

The affected environment includes City of Red Lodge and the immediate vicinity. The primary locations for water main replacement or installation work include the; Water Works Road, and portions of U.S. HWY 212, White Avenue, McGillen Avenue, Grant Avenue, Adams Avenue, Broadway Avenue, 15th Street, and 16th Street.

An environmental assessment (EA), which describes the project and analyzes the environmental impacts, has been prepared by the Montana Department of Environmental Quality (DEQ) and the U.S. Environmental Protection Agency (EPA). The EA indicates that environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species and historical sites are not expected to be adversely impacted as a result of the proposed project. Minor short-term environmental impacts associated with the construction activities will occur. No significant long-term environmental impacts were identified within the EA. Based on the EA, a preliminary decision not to prepare an Environmental Impact Statement (EIS) has been made. A Finding of No Significant Impact (FONSI) statement has been prepared by both the DEQ and the EPA.

The EA and both the EPA and DEQ FONSIs, are available for public examination on the DEQ website: www.deq.mt.gov. The environmental review records, including the EA and FONSI issued by each agency can be viewed at the following locations:

Montana DEQ SFR Program 1520 East 6th Ave. Helena, MT 59601	US EPA, Region 8 Montana Office 10 West 15th Street, Suite 3200 Helena, MT 59626	City of Red Lodge 1 South Platt Red Lodge, MT 59068

Comments supporting or disagreeing with the EA or with the FONSI may be submitted for consideration by each agency. After evaluating the comments received, the agencies will make a final decision. However, no administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact.

FINDING OF NO SIGNIFICANT IMPACT
December 21, 2007

PROJECT: City of Red Lodge, Montana, Water Infrastructure Improvements Phase I

TO: All Interested Government Agencies and the Public

As required by state and federal rules for determining whether an Environmental Impact Statement (EIS) is necessary, an Environmental Assessment (EA) has been performed on the above project. The EA meets the requirements of the National Environmental Policy Act (NEPA) and address the needs of the Environmental Protection Agency (EPA) grant for the project described below.

PROJECT NUMBER:	XP – 98884101-0 (EPA Grant Number)
EPA GRANT:	$ 337,500
USDA RD LOAN:	$ 4,304,715
TSEP GRANT:	$ 750,000
DNRC RRGL GRANT:	$ 100,000
LOCAL FUNDS:	$ 92,000
TOTAL COST:	$5,584,215

ABSTRACT: The City of Red Lodge, through a 2006 Preliminary Engineering Report (PER) prepared by HKM Engineering Inc., has investigated the needs of their public water system. The PER examined all components of the system including supply, storage, transmission and distribution. The PER identified deficiencies within the City's storage, transmission and distribution systems. The storage capacity does not meet current state standards, and much of the distribution system is comprised of old, undersized lines that cannot pass recommended fire flows. Water losses in the system are excessive and repair of leaks is an on-going need. In addition, the Town's existing transmission mains may be leaking which could create a negative pressure in the mains and increase the potential for contamination. The deficiencies within the City's water system create a risk to the public health and safety for the residents and visitors to the City of Red Lodge.

Alternatives for remedying the system deficiencies were developed in the PER and an alternatives evaluation was completed. Based on the analysis, specific water system improvements were recommended. The level of improvements needed is above the City's financial capabilities so a phased approach to updating the system was developed. The proposed Phase I improvements include the replacement of approximately 9,700 feet water transmission main between the treatment plant and the City, replacement of approximately 7,500 feet of water main, and the installation of approximately 1,600 feet of 12-inch water distribution main, installation of fire hydrants, service connections, construction of a new 500,000-gallon buried concrete water storage reservoir with an associated meter building, and all associated valves, controls and appurtenances. The purpose of the project is to make improvements to the water system that is needed to reduce leakage from old mains and improve fire protection to the City.

The affected environment includes all of the City of Red Lodge and the immediate vicinity. However, the primary locations for water main replacement or installation work include the; Water Works Road, and portions of U.S. HWY 212, White Avenue, McGillen Avenue, Grant Avenue, Adams Avenue, Broadway Avenue, 15th Street, and 16th Street. The human environment affected will include the residents of and visitors to the City of Red Lodge.

This project will be funded with a Congressional State and Tribal Assistance Grant (STAG), administered by the Montana Department of Environmental Quality, an RD Loan, TSEP grant, RRGL grant and local funds.

An environmental assessment (EA), prepared by the Montana DEQ and the US EPA, describes the project and analyzes the impacts to the human environment. Based on the EA, the agencies have determined that environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species and historical sites will not be adversely impacted as a result of the proposed project. No significant long-term environmental impacts were identified. Public participation during the planning process demonstrated support for the selected alternative. The EA indicates that there will be no significant environmental impacts from the project and therefore the agencies have made a preliminary decision not to prepare an Environmental Impact Statement (EIS) and have issued separate Finding of No Significant Impact (FONSI) statements. The project environmental review documents, including the PER, EA and FONSI are available for review by the public at the following locations:

Department of Environmental Quality
Drinking Water SRF Program
P.O. Box 200901
Helena, MT 59620-0901
Phone (406) 444-5316
Contact: Robert Ashton

City of Red Lodge
1 South Platt
Red Lodge, MT 59068
Phone (406) 446-1606
Contact: Mayor Brian Roat

Comments on this FONSI or on the EA may be submitted to DEQ at the above address. Comments must be received no later than 30 days from the date of this publication. The Montana DEQ will review all comments received. After evaluating the comments, the Agencies will make a final decision whether or not to prepare an EIS or recommend project changes. No administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact. This public comment and review is part of both the National Environmental Policy Act (NEPA) and the Montana Environmental Policy Act (MEPA) requirements.

Sincerely yours,

_____

Todd Teegarden, Bureau Chief
Technical & Financial Assistance Bureau
Planning Prevention & Assistance Division
Montana Department of Environmental Quality

CITY OF RED LODGE
WATER SYSTEM IMPROVEMENTS

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant:	City of Red Lodge
Address:	1 South Platt, P.O. Box 9 Red Lodge, MT 59068
Project Number:	STAG No. XP-98884101-0

B. CONTACT PERSON

Name:	Brian Roat, Mayor City of Red Lodge
Address:	1 South Platt, P.O. Box 9 Red Lodge, MT 59068
Telephone:	(406) 446-1606

C. ABSTRACT

The City of Red Lodge, through a 2006 Preliminary Engineering Report (PER) prepared by HKM Engineering Inc., has investigated the needs of their public water system. The PER examined all components of the system including supply, storage, transmission and distribution. The PER identified deficiencies within the City's storage, transmission and distribution systems. The storage capacity does not meet current state standards, and much of the distribution system is comprised of old, undersized lines that cannot pass recommended fire flows. Water losses in the system are excessive and repair of leaks is an on-going need. In addition, the Town's existing transmission mains may be leaking which could create a negative pressure in the mains and increase the potential for contamination. The deficiencies within the City's water system create a risk to the public health and safety for the residents and visitors to the City of Red Lodge.

Alternatives for remedying the system deficiencies were developed and an alternatives evaluation was completed in the PER. Based on the analysis, specific water system improvements were recommended. The level of improvements needed is above the City's financial capabilities so a phased approach to updating the system was developed. A three phased improvements plan is proposed. The recommended alternative from the 2006 preliminary engineering report includes the following improvements:

Phase 1 Water Transmission and Distribution Improvements plus Additional Storage

- Replace all 2-inch water mains with 8-inch mains.
- Replace all 4-inch mains west of Word with 8-inch mains.
- Install a new 16-inch transmission line from the water treatment plant to the city.
- Construct a new 300,000-gallon water storage tank at the water treatment plant.

Phase 2 Water Distribution Improvements

- Replace all remaining 4-inch mains with 8-inch mains.
- Install a new 12-inch bypass line to the golf course area.

Phase 3 Water Distribution and System Expansion

- Install a new 8-inch main extension to the new hospital.
- Replace all remaining 6-inch mains with 8-inch mains.

In 2007 the City of Red Lodge along with HKM Engineering reassessed the immediate needs of the water system and selected a Phase I water project that fit the City's existing budget and provided the best system of meeting current needs and providing alternatives for improving the system with future phases and improvements. The **proposed Phase I improvements** include:

- Installing approximately 9,660 feet of 16-inch transmission main from the water treatment plant to the City.
- Install a 500,000 gallon concrete water storage reservoir at the existing water treatment plant.
- Replace approximately 7,500 feet of old 6-inch water main with new 8-inch main including the installation of new fire hydrants.
- Install approximately 1,620 feet of new 12-inch water main along Hwy 212 north to improve or extend service to existing businesses and residences.

The project will be funded by a combination of state and federal grants and a U.S. Department of Agriculture Resource Development loan as well as local funds. This Environmental Assessment (EA) examines the Phase I work as described in the PER and as modified by the City. This EA incorporates any Phase I modifications by utilizing the final Phase I Plans and Specifications as submitted to the Montana Department of Environmental Quality. Based on this review, environmentally sensitive characteristics such as wetlands, floodplains and threatened or endangered species are not expected to be adversely impacted as a consequence of the proposed Phase I project. No significant long-term environmental impacts were identified.

Under Montana law (75-6-112, MCA), no person, including a municipality or county, may construct, extend, or use a public water system until the DEQ has reviewed and approved the plans and specifications for the project.

D. COMMENT PERIOD

Thirty (30) calendar days.

II. PURPOSE AND NEED FOR ACTION

Carbon County, situated in south central Montana, was established in 1895. The City of Red Lodge was platted around 1890 and by 1892 the population reached 1,180. The only water transmission lines from the City's water supply were installed around 1910 and are still the only transmission lines serving the City. An 8-inch cast iron line and a 10-inch cast iron line, both identified as being installed in 1910 run from the City's water treatment plant and wells into the City's distribution system. If either of these lines has to be taken out of service for maintenance, the remaining line cannot provide adequate water supply to the City. The lines are suspected as being a major contributor to the high unaccounted water loss in the City's system. All of the City's water sources and known services are metered. Approximately 50 percent of the water produced at the City's wells and water treatment plant is unaccounted for through leakage and/or connections that are un-metered. This project will replace some of the existing 95 year old lines with a new 16-inch and 8-inch water transmission and distribution mains.

Storage for fire flows and peak day demands are also deficient in Red Lodge's water system. The City currently has a 253,000-gallon reservoir located at the water treatment plant and a 750,000-gallon reservoir located within the City for a total storage capacity of 1,003,000 gallons. The minimum storage capacity the City should have is 1,277,500 gallons, based on Montana Department of Environmental Quality (DEQ)

standards. The PER recommended the construction of a 300,000 gallon storage reservoir near the water treatment plant to provide the additional storage required. Based on additional projections by the City, the proposed tank size was increased to 500,000-gallons to ensure long term viability.

Proper water storage, transmission and distribution systems are important for the public health and safety. Instigating the core changes recommended by the PER will reduce the public health and safety risk to the residents and visitors of Red Lodge.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

The project has been divided into three major sub-projects for the purposes of discussing the alternative analysis. The following are the three major components addressed in this PER:

A. Water transmission mains from the water treatment plant to the City
B. Water distribution improvements and additions
C. Future expansion and additional storage

Each sub-project will be analyzed on its own merit and reviewed accordingly. All three portions will ultimately be required to meet the future demands of the City; however, they can be executed in phases to minimize the impact on users, down time, and construction costs. The following is a discussion of the alternatives to be considered for each of the above projects:

A. WATER TRANSMISSION MAIN ALTERNATIVES

- No action option. The water transmission mains are a potential source of contamination for the water distribution system. No action would leave this health risk open and is not considered a valid option. The transmission mains are also thought to be a major source of water loss in the system.

- Pipe lining option. This option would consist of lining the two existing transmission mains from the water treatment plant to the City. There is one existing 8" water main and one existing 10" water main. During repairs to the old cast iron lines, City crews have noted that the interior of the pipe is corroded and encrusted, which has reduced the inside diameter of the pipes. Prior to lining, both pipes would have to be pigged to restore the inside diameter of the pipes. Due to the age and current interior condition of the pipes slip lining is not considered a viable alternative and is not considered further in this report.

- Pipe bursting option. "Pipe bursting is a trench-less method of replacing existing water mains by breaking and displacing existing pipe and installing a replacement pipe in the void created. The pipe bursting process replaces the original pipe with a new pipe that is the same diameter or larger."[1] For Red Lodge both existing pipes would have to be burst and new pipe pulled into place. Pipe bursting is a viable alternative, and will be evaluated further.

- Installation of new pipe main. A new pipe main could be installed parallel to the existing 8-inch and 10-inch lines and connected at the water treatment plant and at the City. This new line would replace the two older lines and could be sized to carry the full flows that are anticipated for the City through 2026. This is the proposed action. Installation of approximately 9,660 feet of 16-inch transmission main.

A.1 WATER TRANSMISSION MAIN COST COMPARISON AND ALTERNATIVE SELECTION

As indicated above the only viable alternatives for the water transmission line are pipe bursting and installing new pipe. The PER included a present worth analysis and the generated values were used to determine the most cost-effective of these two alternatives. This analysis showed the pipe bursting option as costing approximately 36% more than installing new 16-inch pipe.

In addition to the cost analysis the PER also ranked the alternatives based on environmental and social impacts. The matrix of selection criteria shown below summarizes the basis of selection. The lower present worth cost of installing a new 16-inch transmission line rather than pipe bursting two existing lines is one of the deciding factors in the selection of installing a new 16-inch transmission main from the water treatment plant and wells into the City. Another major factor in the selection of installing new pipe is the ability to construct the new line in public right of way. The table compares the two alternatives based on ranking criteria of best (1), worst (2), and no difference (0).

Table 2. Transmission Main Alternative Comparison

	Pipe Bursting Alternative	New 16-Inch Line Alternative
Present worth	2	1
Alignment Access	2	1
Environmental Impacts	0	0
Historical/Cultural	0	0
Social Impacts	0	0
Totals	4	2

Based on the alternative analysis, the 2006 PER recommended the installation of approximately 9,800 feet of new 16-inch water transmission main from the water treatment plant to the city. Based on further analysis by the City and HKM Engineering, conducted in 2007, the water system transmission main needs have been further defined and result in a proposed Phase I replacement length of 9,660 feet. The estimated cost for this work is $1,266,000.

B. WATER DISTRIBUTION ALTERNATIVES AND COSTS

- No action option. This option is not considered a valid option as it does not address the safety concerns of low distribution pressures and restricted fire flows to hydrants located on 6-inch and smaller water mains.

- Replacement of all piping smaller than 8 inches. Replacing all lines smaller than the 8-inch minimum provides adequate pressure and fire flows to all areas of the City. This is the proposed action.

2006 PER determined there is no viable alternative to improve the distribution system other than replacing the old and undersized line. These improvements are necessary to provide adequate domestic pressures and fire protection to the citizens. Due to the overall cost of replacing all of the undersized lines, the 2006 PER developed a priority schedule.

Based on further analysis by the City and HKM Engineering, conducted in 2007, the water system distribution priorities have been modified to better reflect the current and future needs of the community. The proposed Phase I distribution improvements are summarized with the estimated construction costs below:

Water Distribution Priority 1 – Phase I Construction (see attached map)
Zone C - 1,872 LF of 8-inch main replacing existing 6-inch main; McGillen Ave. – 20th to 15th Street; Engineer's Estimate - $415,000.
Zone D-1- 650 LF of 8-inch main replacing existing 6-inch main; 15th Street – McGillen Ave. to Adams Ave.; Engineer's Estimate - $86,000.
Zone D-2 – 1,040 LF of 8-inch main replacing existing 6-inch main; Grant Ave. – 17th to 14th Street; Engineer's Estimate – $201,000.
Zone D-3 – 310 LF of 8-inch main replacing existing 6-inch main; 16th Street – Grant to Adams Avenues; Engineer's Estimate - $56,000.
Zone E- 1,760 LF of 8-inch main replacing existing 6-inch main; Adams Ave. – 16th to 11th Street; Engineer's estimate – $385,000.
Zone G – 1,860 LF of 8-inch main replacing existing 6-inch main; Broadway Ave. - 8th to 13th Street; Engineer's estimate – $717,000.
Zone I – 1,620 LF of 12-inch main to serve existing businesses and residences; Hwy 212 – 1st Street north along Hwy 212 (west side of Hwy); engineer's estimate -$498,000.

Work in Zone C through Zone G will replace approximately 7,500 feet of 6-inch main with 8-inch water main. Work in Zone I is the installation of approximately 1,600 feet of new 12-inch water main to serve the existing residences and businesses along the west side of Highway 212 North. The east side of Highway 212 north through Zone I is currently served with an existing 8-inch water main. This 8-inch main also provides two service connections to the west side of Highway 212 (Phase I work would abandon the two service lines under Hwy 212). The new water line in Zone I would eliminate the need for the existing private water supply wells. Both sides of Highway 212 in this area are served by city sewer. The total estimated cost for the Phase I water distribution work is approximately $2,358,000.

Future projects and phases will continue to address distribution system needs. The proposed Phase 1 distribution work will improve the flows and pressures within the southern portion of the City and will help ensure sufficient pressures and flows as future projects branch out from core distribution mains. This environmental assessment applies only to the Phase I work scheduled for construction in 2008. Work performed under future phases will include additional environmental assessments as needed.

C. WATER STORAGE AND MAIN EXTENSIONS

The 2006 PER examined the water storage and main extension needs by determining existing capacities and identifying growth areas within and around Red Lodge. The PER indicated that 300,000 gallons of additional storage was necessary and that main extensions would be needed in the future to provide water service to new subdivisions, the new healthcare facility and other growth areas.

Based on further analysis by the City and HKM Engineering in 2007 the water system storage and main extensions priorities have been modified to better reflect the current budget and needs of the community. The selected Phase I storage improvements project include the installation of a 500,000 gallon concrete water storage reservoir adjacent to the existing water treatment plant storage tank. The updated phase I work will not include the extensions of mains or the expansion of the water system within the City of Red Lodge. Any future main extensions will require additional environmental assessment to ensure compliance with all applicable state and federal regulations. The costs associated with the selected storage alternatives can bee seen below:

Reservoir and Meter Building – 500,000 gallon concrete tank and attached Meter Building; Location: Water Treatment Plant; Engineer's estimate - $1,246,000

D. TOTAL ESTIMATED COSTS, FUNDING COMMITMENTS AND USER RATES

The 2006 PER estimated the total construction cost to complete all of the recommended alternatives was approximately 9.4 million dollars in 2006. As of September 2007 the selected Phase 1 work includes the installation of approximately 9,660 feet of 16-inch transmission main, installation of a 500,000 gallon concrete water storage reservoir, installation of approximately 7,500 feet of 8-inch water main and installation of approximately 1,620 feet of 12-inch water main. The **total estimated cost for this Phase I work is $4,870,000**. This total project cost does not include loan fees or project contingency costs. For Phase I of the work, the City of Red Lodge has received funding commitments of:

$4,304,715	loan – US Department of Agriculture, Resource Development (RD)
$750,000	grant – Montana Department of Commerce/Treasure State Endowment Program (TSEP)
$100,000	grant – Montana Department of Natural Resources and Conservation/Renewable Resource Grant and Loan Program (RRGL)
$337,500	grant – US Environmental Protection Agency, State and Tribal Assistance Grants (STAG)
$ 92,000	Applicant Contribution (City of Red Lodge)
$**5,584,215**	**Total Phase I Funding**

Total Funding for the proposed Phase I Project - $5,584,215 (the City can adjust the amount borrowed from RD once bids have been received). The City of Red Lodge expects to be able to complete all of the Phase I work within the existing budget.

USER RATES

According to the recent analysis of residential water usage, the average current water rate for the City is $20.66 per month and the average sewer rates are $27.28 per month, for a combined average rate of $47.94. Based on US Census data on median household income levels for the City of Red Lodge, the Montana Department of Commerce combined water and sewer target rate for Red Lodge is $55.99, $8.05 more than the current rate. The City of Red Lodge has increased water rates (August 2007) to meet United States Department of Agriculture / Rural Development (USDA/RD) target user rates in order to cover debt incurred in improving the water distribution system as part of this project. The City will also meet projected USDA/RD EDU rate recommendations for the City of Red Lodge.

IV. AFFECTED ENVIRONMENT

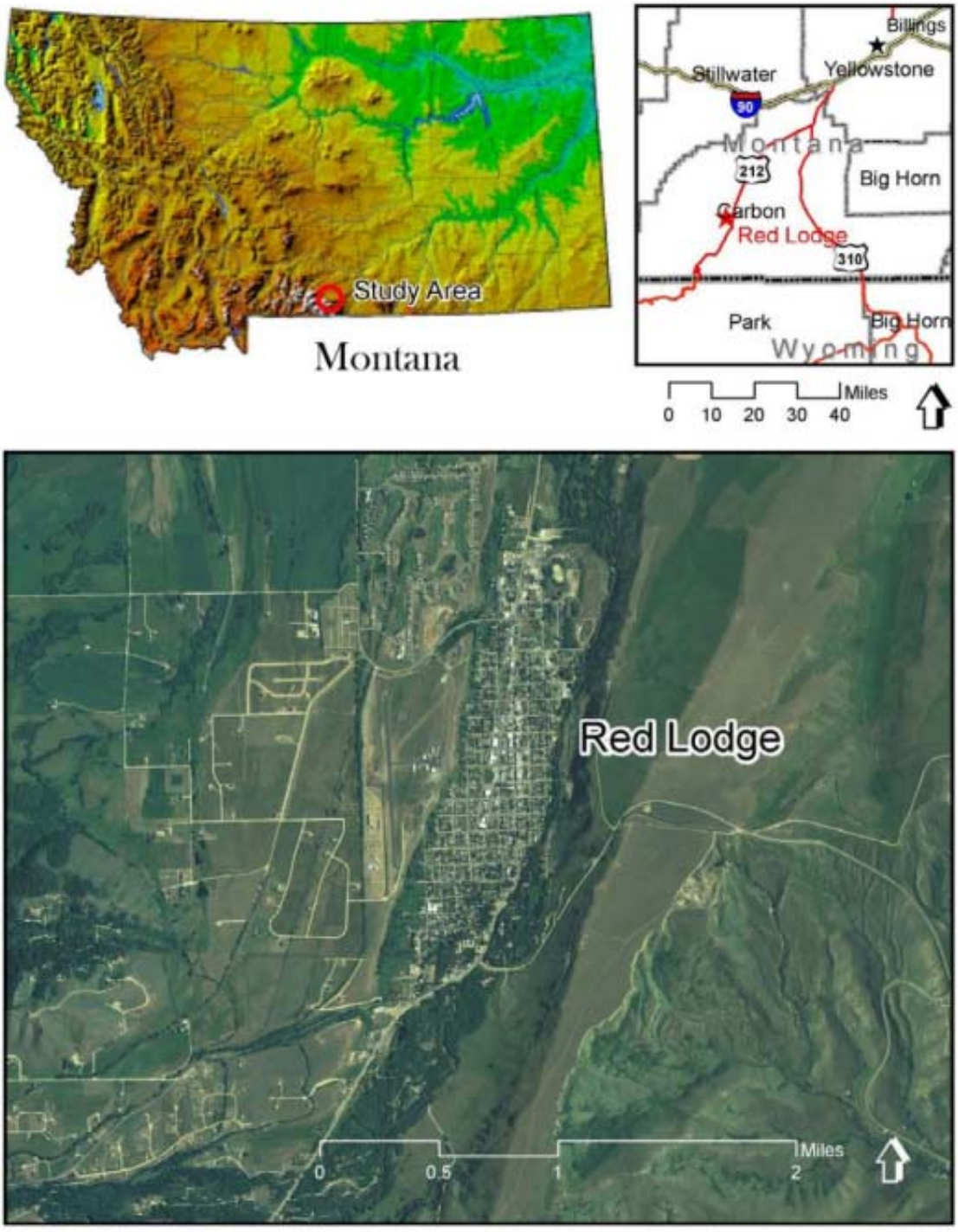
A. STUDY AREA

Red Lodge is located along Highway 212 at the foot of the Beartooth Mountains. U.S. Highway 212 crosses Carbon County from the northeast to southwest, and passes through Red Lodge as it follows along the Rock Creek Valley from Rockvale to the Beartooth Mountains. This highway provides a major link between the community and Billings, which is approximately 60 miles to the northeast. Figure 1 shows the general location of Red Lodge and the surrounding communities.

Red Lodge is the county seat of Carbon County, so named because of the extensive coal deposits located in the county. Much of the coal mining activity in the county declined in the 1930's, which resulted in the closing of the Red Lodge mines. This decline caused a loss of population in the City from a high of approximately 5,000 people to 1,844 by the 1970 Census. The many scenic and recreational opportunities in the area and its close proximity to Yellowstone National Park aid in maintaining traffic flow and visitor activity throughout the year. This recreational development and

effective planning by the City have resulted in a gradual increase to 1,958 people by the 1990 Census and 2,177 people by the 2000 Census.

Figure 1 -- Red Lodge Location



B. GROWTH AREAS, POPULATION AND FLOW PROJECTIONS

GROWTH AREAS

The City of Red Lodge is experiencing growth trends in two major areas. The first area is located to the North of the airport and west of the downtown area. This development trend is likely to continue as new condominiums are built to satisfy a growing demand for properties to service the recreational and retirement needs of the community. The second major growth area is directly to the west of the airport. This development is a business park that is currently outside the existing City limits; however, this park has the potential to be annexed into the City in the future.

In addition, significant expansion is occurring to the west of the airport in a new development commonly called Remington Ranch. The Remington Ranch area is currently being developed in two phases of 70 and 90 units, respectively. While not in the current City limits, the Remington Ranch is connected to the City's wastewater system and at least one phase may connect to the City's water system. Additional development is anticipated in the area surrounding the golf course. Currently, a new subdivision with approximately 136 lots north of the existing golf course development is going through the approval process (platted area shown north of Grizzly Circle).

Development is also expected to the east of Rock Creek, to the north and south of the current City limits. The planning area south of Red Lodge contains approximately 120 acres which is expected to develop to approximately 240 lots and the area northeast of the City contains approximately 60 acres which is expected to develop to approximately 120 lots. Additional growth is expected through infill within the existing City limits.

POPULATION PROJECTIONS

Population estimates where developed using several data sources including; census data from 1990 to 2004, City of Red Lodge estimates, HKM Engineering estimates, and Montana Department of Commerce data which estimated a 2010 population of 2,612 persons.

The Montana Department of Commerce (DOC) number corresponds to a growth rate of 1.45 percent, which is believed to be slightly low due to the current trend of annexation and development. The growth rate used in the 1999 City of Red Lodge Wastewater PER was 2.5 percent. Using the 1998 and 2005 estimates above, a growth rate of 2.2 percent is predicted. This number more accurately reflects the current growth trends of the City based on annexation and recent housing construction activity. A growth rate of 2.2 percent leads to a predicted population of 4,140 persons in year 2026.

FLOW PROJECTIONS

Future water demands have been estimated based on the projected population growth with the assumption that the high current leakage/un-metered rate in the water distribution system will be reduced as older pipelines are replaced. With continued leak detection effort and the replacement of older pipelines it is expected that the current leakage/un-metered rate of 48 to 54 percent can be reduced to 15 to 20 percent. The projected water demands for the year 2026 are shown below in Table 3.

Table 3. Future Water Demands

Design Year	2026
Projected Population	4140
Average Per Capita Demand	125 gal/cap/day
Projected Average Day Domestic & Commercial Demand	517,500 gallons/day
Leakage & Un-metered Usage	130,000 gallons/day
Total Projected Average Day Demand	647,500 gallons/day
Peak Day/ Average Day	2.32
Projected Peak Day	1,502,200 gallons/day

Based on the City's water production records, the peak day demand from 2002 through 2005 was 1,667,000 gallons, which includes the current leakage in the system. For the year 2026 projected peak-day demand HKM Engineering is assuming that the current leakage rate of 48 to 54 percent can be reduced to 20 percent through a combination of leak detection and replacement of older lines. With these assumptions, the projected peak-day demand in 2026 will be 1,507,000 gallons per day. (The reduction in leakage can supply the additional domestic and commercial demand). The City of Red Lodge relies on both surface water and ground water for its water supply. Based on previous studies by HKM Engineering, adequate water supply for the City's estimated population in 2026 can be met from either surface water or groundwater sources.

C. NATURAL FEATURES

Soils

Proposed projects discussed in the 2006 PER are all to be located within the City of Red Lodge limits, within existing right of way, or within existing easements. Predominate soil material in the area consists of unconsolidated alluvial valley fill (terrace gravels) that were deposited primarily by glacial flood waters. The valley fill material consists of coarse gravel with an abundance of cobbles and boulders. Bedrock directly beneath Red Lodge is encountered at depths greater than about 50 feet.

In the Red Lodge area, the soils found on the benches east and west of the Rock Creek valley are predominantly: Charlos loam and Thiel cobbly clay loam. Charlos is the more prevalent of the two soil types. These soils are underlain by sandstones and shales occurring at an unknown depth. Care must be taken to avoid the application of water too close to the nearly vertical edge of the Rock Creek Valley so that formation of springs or seeps along the face can be avoided.

Topography and Land Use

The valley floor is relatively flat with gently sloping areas with drainage towards Rock Creek. Benches rise abruptly on both the east and west sides of the valley and parallel the valley for several miles to the north before tapering off. Both benches parallel the existing Rock Creek valley extending to the north. The existing land use in both these areas is hay meadows and range. The west bench is more developed than the east bench and is the site of the existing airport and the Country Club Estates.

Groundwater and Surface Water

In 1968, Mueller Engineering prepared a comprehensive plan for water and sewer service in Carbon County. In their report they noted that the most significant geologic feature of the Red Lodge Valley was the vast quantities of alluvium along the valley floor. Because the alluvium is loosely compacted, it provides storage for large quantities of groundwater. Shallow wells drilled into these gravels produce from 250 to over 1,000 gallons per minute (gpm) depending on location, pumping equipment, and well size. Recharge is provided by Rock Creek and also from precipitation and irrigation return flows in the area. The groundwater ranges from 4 to 17 feet below the land surface across the entire valley usually reaching a high level in the late summer and a low level in the early spring before the

start of the irrigation season. Predominant surface and subsurface drainage along the valley floor is in a northeasterly direction towards Rock Creek. Numerous irrigation ditches are located in the west portion of the planning area that is primarily agricultural land.

Flood Plain and Wetlands

FEMA has delineated the flood plain for Rock Creek. This creek flows from south to north along the east edge of the city. Portions of the flood plain exist within the city limits, however, no portion of the proposed Phase I project are within or impact the flood plain. Likewise, any wetlands associated with Rock Creek will not be affected by the project.

Wildlife

Fauna of the area consists of typical mammalian species found in the intermountain west, including mule deer, whitetail deer, antelope, coyote, rabbit, skunk, weasel, rodents and others. Common bird species include the black-billed magpie, American robin, Canadian goose, osprey, blackbird, sparrow, warbler, common waterfowl, other raptors, game birds and others. Aquatic species in Rock Creek may include Brown trout, Rainbow Trout, and Cutthroat Trout.

Special Status Species

The Montana Natural Heritage Program (MNHP) executed a search of their database with regard to species of concern. Three such species were identified near the proposed project area, namely: The vascular plant beautiful fleabane (*Erigeron formosissimus*) is located throughout Carbon County. The vertebrate animal Preble's shrew (*Sorex preblei*) is located primarily to the west of the proposed work sites; however, the probable occupied habitat area encompasses the entire City of Red Lodge. The vertebrate animal Canada lynx (*Lynx canadensis*) is located primarily to the west of the proposed work sites; however, the probable occupied habitat area encompasses the entire City of Red Lodge. All proposed work is to be completed within existing right of way or easements adjacent to right of way; therefore, no negative impact is anticipated to this animal.

Vegetation

Vegetation types in immediate proximity to Red Lodge include agricultural, grazing and riparian zones. The agricultural sites are located in various locations within the City limits and in all directions from Town. Alfalfa and grass hay are typical crops. The riparian zones are located along Rock Creek. Typical riparian flora consists of willows and other hydric-adapted species. The fringe area is primarily cottonwood.

Historical/Cultural Resources

The Montana State Historic Preservation Office (SHPO) has documented historic sites in downtown Red Lodge and surrounding areas. Part of the project corridor will run along Broadway and adjacent to the Red Lodge Commercial Historic District. No Historical or Cultural site shall be affected by the project as all water mains exist in street right of ways.

V. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

Soils Suitability, topographic and Geologic Constraints

No soil, topography or geological constraints are present for the proposed Phase I water project. The soils throughout the Red Lodge area consists of topsoil overlying silty sand and silt deposits which in turn are underlain by poorly graded gravel. Boulders up to 30 inches in diameter are not uncommon. Water and sewer work is routinely completed in the area. Most of the projected growth areas currently have some development including sewer and water systems. Based on the existing conditions and soils types, the indirect impacts of the proposed Phase I water project will have no significant effect on the soils or topography.

Land Use

Land use within the developed part of Red Lodge is not anticipated to change as a result of the water improvements project. However, there are areas of agricultural land that may be developed into residential or commercial districts as future water and wastewater projects extend service to these area. The current proposed Phase I water project only upgrades and replaces existing water mains within the city limits but may facilitate future expansion of the system by increasing storage capacity and distribution system flow capacity. The indirect impacts from increased growth are loss of rural character and changes from ranching/farming land uses to more suburban development. Potential induced growth from the proposed project is within the area growth plan for Red Lodge. Induced growth and potential change in land use will not have significant impact to the human environment.

Groundwater and Surface Water

The proposed water system improvements project will not negatively impact any of the water resources in the area. The project would be expected to reduce the current leakage from the transmission main and therefore would result in a more beneficial use of the available water supply.

Flood Plain and Wetlands

The proposed Phase I water improvements project does not include work within flood plain or wetland areas and no negative impact is expected. Likewise, the projected growth areas are not located within flood plain or wetland areas and therefore potential indirect impacts will not significantly affect the flood plain or wetlands.

Vegetation/Wildlife Species and Habitats/Unique, Endangered Species

As discussed, MNHP has identified three species of concern in the area. The three species include the plant beautiful fleabane, the vertebrate Preble's shrew, and the Canada lynx. The proposed water project will install water distribution mains within existing city roadways and right-of-ways and will therefore not cause significant impacts to vegetation or wildlife. Prior to construction of the transmission line from the City to the water treatment plant, a plant survey of the transmission main alignment will be conducted to ensure no significant impacts to the vascular plant beautiful fleabane (erigeron formosissimus). The indirect impacts from increased water system capacity, and potential growth, are reduction/fragmentation of wildlife habitat, increased run-off and sediment, and loss of rural character. However, the direct and indirect impacts will not cause significant impacts to vegetation and wildlife resources.

Historical/Cultural Resources

The State Historical Preservation Office (SHPO) has been contacted regarding the project site. Historical buildings are located in the Downtown District of Red Lodge but no sites were identified along the proposed alignments for the transmission mains. Subsequently, historical and cultural resources will not be impacted by the proposed Phase I water project.

Hazardous Facilities

No hazardous facilities are known to exist along the pipeline alignments other than power lines that serve the area. The Source Water Delineation and Assessment Report did not identify any hazardous conditions or contaminant sources in the vicinity of the well at the water treatment plant. There is the potential to encounter contaminant sources as the pipeline nears the City limits and in areas of higher development. The installation of the new pipeline with open-cut construction would likely identify contaminated sites when they are encountered. Based on the absence of hazardous facilities, the Phase I water project will have no significant impact on these facilities.

Social Impacts

Improvement to the water system will allow increased population growth and development within Red Lodge's planning boundary. The increased growth will be viewed by some as a negative impact and by some as a positive impact on the community. In general, the community has promoted tourism and has undertaken a significant level of planning to identify ways to encourage economic development within the City. The top priority identified in the August 2004 economic development report was "lack of adequate

infrastructure – and funding for it – in the City"2 New and/or improved water transmission mains are required to provide improved fire protection to the City and to reduce the current high rate of water loss in the system. The impacts of the proposed Phase I water project on the local population will be an increase fire protection and a reduction of water loss from the system. User rates have already been increased to pay for the project and meet projected USDA/RD EDU rate recommendations.

Air Quality - Short-term negative impacts on the air quality will occur from heavy equipment, dust and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be implemented during construction to control dust, thus minimizing this problem.

Public Health – The proposed project will not have adverse impacts on public health, and should instead enhance public health by reducing the risk of water system contamination from backflow problems and by increasing fire flows.

Energy - During construction of the proposed project, additional energy will be consumed, resulting in a direct short-term increased demand on this resource. In the long term, reducing the distribution system water losses will conserve energy through reduced pumping demands.

Noise - Short-term impacts from increased noise levels may occur during construction of the proposed project improvements. Construction activities are anticipated to last three to five months and will occur only during daylight hours.

A. UNAVOIDABLE ADVERSE IMPACTS

Many of the water lines will be constructed within the street right-of-way; therefore street surface restoration will be required. Also, access to and from homes and businesses during construction will take special consideration. Short-term construction related impacts, such as noise, dust and traffic disruption, will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided.

B. CUMMULATIVE IMPACTS

This project addresses the existing water utility needs and will have no subsequent negative cumulative effects on resources, ecosystems or human communities. However, this water project may facilitate future expansion of the water system and an increase in the capacity of the distribution system. This project is part of a phased improvements plan that includes providing City water service to new and developing areas within and surrounding the city of Red Lodge. It is reasonable to assume that some agricultural lands will be converted to residential and commercial areas. This growth would increase traffic thus increasing air pollution and noise. The potential for soil erosion and runoff from paved areas could potentially impact surface water quality in the area. However, this growth is within the bounds of the existing Red Lodge growth policy. The projected growth over the next 20 years projected by the Red Lodge growth policy is not expected to cause cumulative effects beyond the capacity of the resources. Future NEPA analysis would be required for any discussion of cumulative impacts beyond this scope and time frame.

VI. PUBLIC PARTICIPATION

A public meeting was held April 6, 2006. This meeting was advertised for two weeks in the local newspaper, the Carbon County News. The meeting was attended by only half a dozen people, a possible consequence of Red Lodge planning for many civic improvements in the past year. In addition, the Montana Department of

[2] Red Lodge Comprehensive Economic Development Strategy, August 2004, The Hingston Roach Group, Inc., et.al.

Transportation has held meetings in town because of its highway projects on Montana 78 leading out of Red Lodge. A reporter attended the public meeting and an article appeared in the local paper the following week.

At the public meeting, members of the public were informed about the need for the project, the cost of the project, and the necessity of raising rates to pay for the project. The estimated cost per household was presented. TSEP's target rates were explained at this meeting as well. Comments received at the meeting focused on implementation of the project. One individual stated that the base rates should be raised, but that increments above the base rate should remain small, while another person emphasized the importance of an incremental rate structure. The City intends to study its rate structure as it implements this project.

In addition to the public meeting, the City planner approached several local organizations to discuss the project. Some of these local organizations drafted letters of support, including the Rotary and Lions Clubs, as well as the local realtor association and the Chamber of Commerce. The Red Lodge Planning Board also drafted a letter in support of the project.

VII. AGENCY ACTION, APPLICABLE REGULATIONS, AND PERMITTING AUTHORITIES

All water system improvements (storage, transmission and distribution) will be designed to meet Montana DEQ requirements. Proper State regulatory review and approval of the project plans and specifications will be obtained. All applicable local, federal and state permits will be acquired including, but not limited to, a stormwater discharge permit and a construction-dewatering permit if needed.

All appropriate easements and access will be addressed with regards to the water system infrastructure. If required, land acquisition or long term agreements will be established for the land requirements associated with a new well and transmission main.

VIII. REFERENCE DOCUMENTS

The following documents were utilized in the environmental review of this project and are considered to be part of the project file:

A. The City of Red Lodge, Montana – Water Distribution System Improvements Preliminary Engineering Report, May 2006, prepared by HKM Engineering, Billings, Montana.
B. The City of Red Lodge, Montana – Draft Plans and Specification for 2007 Water Line Replacement Project, July 2007, Prepared by HKM Engineering, Billings, Helena, Montana.
C. Uniform Environmental Checklist for Montana Public Facility Projects, May 2006, prepared by HKM Engineering, Billings, Montana.

IX. AGENCIES CONSULTED

The following agencies were contacted regarding the proposed construction of this project:

A. The Montana Department of Fish, Wildlife and Parks was asked in a letter by the project consultant for comments on the proposed project. The Montana Fish Wildlife and Parks reviewed the project area and determined that "all work was taking place on existing street right-of-way and had no affect on fish, wildlife and park lands" (March of 2007).

B. The Montana Department of Transportation reviewed the project and indicated that no significant impacts from the project where anticipated. Utility agreements were obtained by the consultant where water main replacement would occur in state right of way and are on file at the City of Red Lodge (Spring 2007).

C. The Montana Department of Environmental Quality Air Quality Section reviewed the project and indicated the Red Lodge area was not listed as "nonattainment" areas and therefore was exempt from any federal "conformity" determinations or air quality analysis.

D. The U.S. Fish and Wildlife Service was asked in a letter by the project consultant for comments on the proposed project. "The U.S. Fish and Wildlife Service reviewed the proposed project and determined that no federally listed species or critical habitat occurs within the project area" (Feb. 27, 2007).

E. The U.S. Army Corps of Engineers was asked in a letter by the project consultant for comments on the proposed project. The U.S. Army Corps of Engineers stated that no areas in the project area that conflicted with the policies of the Corps of Engineers.

F. The Montana Historical Society's Historic Preservation Office reviewed the project and a comment email was received by email on September 13, 2005. The letter states, "We feel that because the project will be occurring within existing streets and roads there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project we would ask that our office be contacted and the site investigated."

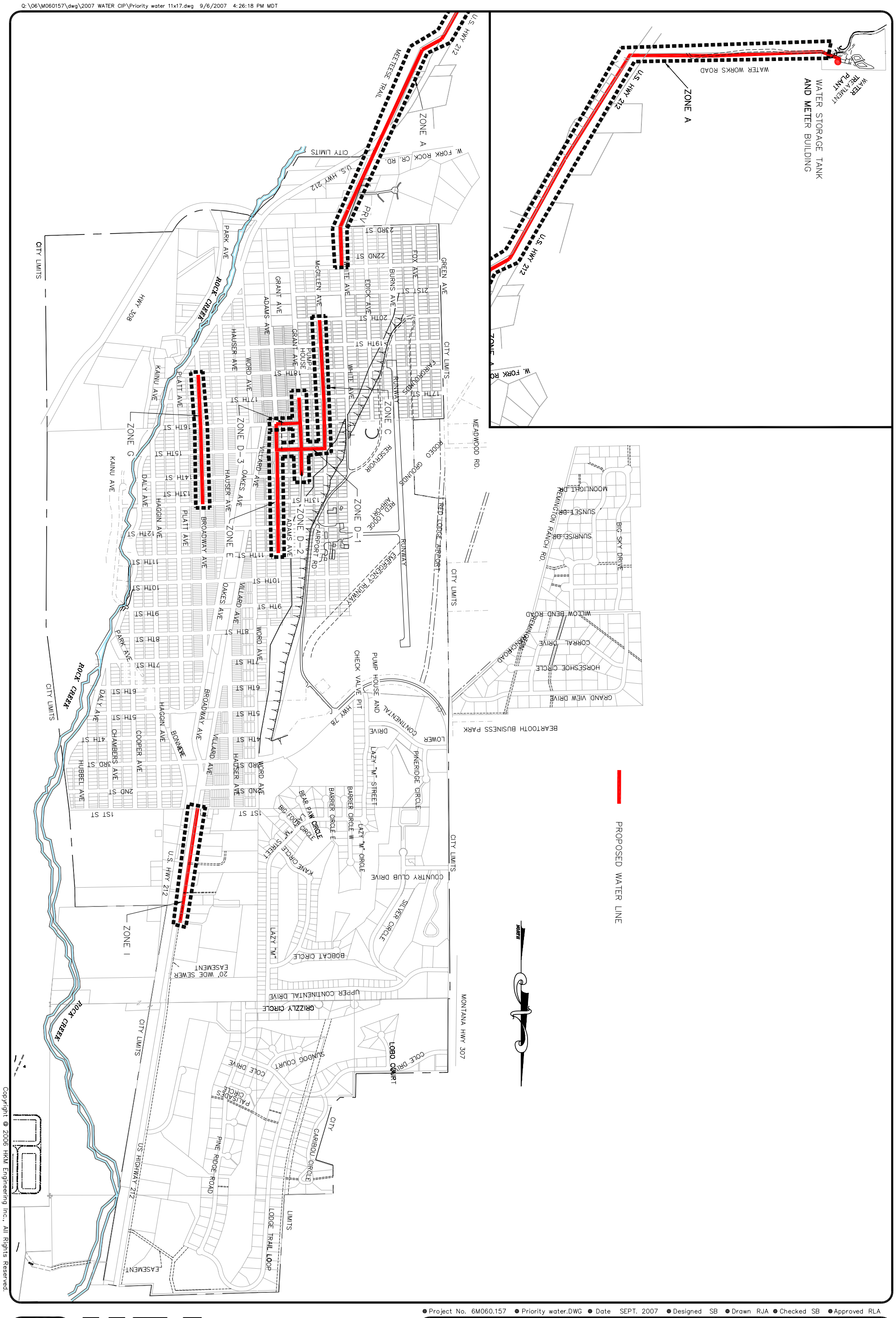
G. The Montana Department of Natural Resource and Conservation, Southern Land Office reviewed the proposed project and indicated the project would have not impact to State School Trust lands.

H. The Montana Department of Natural Resource and Conservation's Floodplain Section Service was asked in a letter by the project consultant for comments on the proposed project. As all project work was of replacement of existing water mains in dedicated street right of way no conflicts were found.

I. The Montana Department of Environmental Quality Water Permits Section reviewed the proposed project and noted that permits for construction dewatering and disinfected water general MPDES discharge permits may be required for the project.

J. Montana Natural Heritage Program (MNHP) reviewed the project and responded in a September 13, 2005 letter. The MNHP identified three species of concern within the Red Lodge area. Also, provided where species of concern reports and a map of potential habitat areas.

Q:\06\M060157\dwg\2007 WATER CIP\Priority water 11x17.dwg 9/6/2007 4:26:18 PM MDT



● Project No. 6M060.157 ● Priority water.DWG ● Date SEPT. 2007 ● Designed SB ● Drawn RJA ● Checked SB ● Approved RLA

HKM ENGINEERING
Granite Tower Building
222 N. 32nd St., Suite 700
P.O. Box 31318
Billings, MT 59107-1318
(406) 656-6399, Fax (406) 656-6398

PRIORITY 1 WATER SYSTEM IMPROVEMENTS
RED LODGE, MONTANA

WATER DISTRIBUTION SYSTEM
2007 WATER LINE REPLACEMENT PROJECT

WARNING
0 ? 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

No.	Revision	By	Date
1	Priority map	AJM	12/12/06
2	Priority map	AJM	02/12/07
3	Priority map	AJM	04/10/07
4	Priority map	AJM	12/05/07

X. RECOMMENDATION FOR FURTURE ENVIRONMENTAL ANALYSIS

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Rationale for Recommendation: Through this EA, The Montana DEQ has verified that none of the adverse impacts of the City of Red Lodge's Water System Improvements Project are significant. Therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607 thru 17.4.610.

EA Prepared By:

Robert Ashton Date

EA Reviewed By:

Mac Golz, P.E. Date

EA Approved By:

Todd Teegarden, P.E. Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8P-W-MS

FINDING OF NO SIGNIFICANT IMPACT

PROJECT: City of Red Lodge, Water System Improvements

TO: All Interested Government Agencies and the Public

As required by the National Environmental Policy Act (NEPA), an environmental review has been performed on the proposed Environmental Protection Agency (EPA) grant for the above project.

PROJECT NUMBER:	XP98884101
TOTAL COST:	$5,584,215
EPA GRANT:	$ 337,500
USDA LOAN:	$4,304,715
STATE GRANTS:	$ 850,000
LOCAL SHARE:	$ 92,000

The City of Red Lodge plans to replace the transmission mains from the water treatment plant to the City with a 16-inch main; install a 500,000 gallon concrete water storage reservoir at the existing water treatment plant; replace approximately 7,500 feet of old 6-inch water main with new 8-inch main, with new fire hydrants. The project also includes installation of approximately 1,620 feet of new 12-inch water main along Highway 212 North to improve or extend service to existing businesses and residences. The project is to be funded in part by an EPA Special Appropriations Grant.

The project is needed to provide a reliable source of drinking water, and sufficient fire flow. The project will replace leaking 97-year-old transmission mains, under-sized water mains and increase water storage capacity. The project will have few direct environmental impacts. There will be some impacts associated with construction of the water mains and reservoir. The increase in storage capacity and leak reduction will allow the water system to serve developing areas within and surrounding the City of Red Lodge. The indirect and cumulative impacts from increased capacity and associated future growth are typically reduction/fragmentation of wildlife habitat, increased run-off and sediment, and loss of rural character.

The review process did not indicate that significant environmental impacts would result from the proposed action. Consequently, a preliminary decision not to prepare an EIS has been

made. This action is taken on the basis of careful review of the engineering reports, environmental information documents, and other supporting documentation which are available for public review at the City of Red Lodge Offices, 1 South Platt, Red Lodge, Montana.

Comments supporting or disagreeing with this decision may be submitted for consideration by the EPA, to:

Jay Sinnott
US EPA, Region 8 Montana Office
10 W 15th Street, Suite 3200
Helena, MT 59626

After evaluating the comments received, EPA will make a final decision. No administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact.

Sincerely,

Larry Svoboda
Director, NEPA Program
Office of Ecosystem Protection and Remediation